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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/776,383	02/02/2001	Min-Jin Ko	YOUME5.001AUS	1430

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EXAMINER

ZIMMER, MARC S

ART UNIT	PAPER NUMBER
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1712

DATE MAILED: 11/06/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/776,383

Applicant(s)

KO ET AL.

Examiner

Marc S. Zimmer

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 September 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 4 and 7-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 7-11 is/are rejected.
- 7) ☒ Claim(s) 4 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

In paper no. 3, the Examiner had indicated that claims 4 and 7-11 contained patentable subject matter. Accordingly, Applicant amended each of these claims to place them in independent form by incorporating all of the subject matter of the original base claim (claim 1). While these amendments were adequate to overcome the references applied earlier, the Examiner has since located an additional reference that anticipates at least some of the remaining claims. The relevance of this reference to these claims is set forth below.

Claim Objections

Claims 4 and 7-11 are objected to because, in describing the bridged silane component, component (b), the structural variable R^4_q where "q" denotes the number of such groups is, instead, depicted as R_{4q} . Correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in-

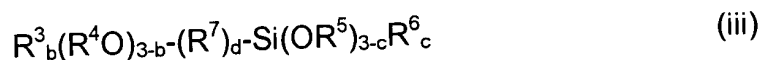
- (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or
- (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

Claims 7-11 are rejected under 35 U.S.C. 102(b) as being anticipated by Kurosawa et al., U.S. Patent # 6,410,151. Kurosawa et al., U.S. Patent # 6,410,151. Kurosawa discloses a coating composition that may be employed to form interlayer

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insulating films on various substrates/articles of manufacture including semiconductors.

The composition is comprised of two condensation products, components A and B, each of which is derived from the same starting materials but in the presence of a different condensation catalyst. The first of said products is prepared from at least one (column 1, line 47) of the following silanes;



wherein R^7 corresponds to an oxygen atom, a divalent alkylene group, or a divalent arylene group; in the presence of an alkali catalyst. To reiterate, these compounds may be employed alone or in combination according to column 7, lines 26-28. Notably, in those instances where R^7 denotes an alkylene/arylene group (column 6, lines 31-67 through column 7, lines 1-25), the third possible starting material is equivalent to component (b) of the instant invention. Likewise, compounds (i) and (ii) are chemically equivalent to component (a) of the instant invention hence the condensation product derived from either (i) or (ii) and (iii) is, by extension, equivalent to the organic silicate polymer contemplated in claim 7. Further, the condensation product obtained from these compounds is characterized as having a weight-average molecular weight of from 50,000 to 3,000,000 (column 8, lines 59-61).

The second component of the composition is also synthesized from (i), (ii), or (iii), and combinations thereof. The only distinguishing feature of said second component is

that, whereas the first is prepared utilizing an alkali catalyst, the latter is synthesized in the presence of a metal chelate.

In columns 14, 15, and 16, numerous strategies for preparing components A and B are outlined. Thereafter, they describe methods for preparing films from the compositions containing these materials. A composition having a solids content of between 2 and 50% (column 16, lines 22-23) may be introduced onto a substrate by one of several techniques including spin coating (column 16, line 40) after which the coated substrate is subjected to heating at temperatures of 450° C or less in an inert atmosphere to dry and cure the coating into a continuous film. As before, semiconductors are among the substrates onto which the coating may be applied.

Allowable Subject Matter

Amended claim 4 is allowable pending the correction of the formula identified under the claim objections section. Frequently, compounds adhering to the formula in (b) are prepared by carrying out sequential hydrosilylation reactions on an α,ω -diene. Although Drake, U.S. Patent # 5,359,112 teaches the drawbacks associated with this approach (isomerization of the second double bond to an internal position in the course of hydrosilylating the first) in column 1, lines 32-38, they do not propose the method of claim 4 as a solution.

Priority

Applicant's claim for domestic priority under 35 U.S.C. 119(e) is acknowledged. However, the provisional application upon which priority is claimed fails to provide adequate support under 35 U.S.C. 112 for claims 4 and 7-11 of this application. Indeed,

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the majority of the embodiments encompassed by these claims are not mentioned in the one page disclosure of provisional application serial no. 60/179,653. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marc S. Zimmer whose telephone number is 703-605-1176. The examiner can normally be reached on Monday-Friday 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Dawson can be reached on 703-308-2340. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

November 4, 2002



Robert Dawson
Supervisory Patent Examiner
Technology Center 1700